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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,572	03/25/2004	Yasutake Ohishi	T0203.0006/P006	4844

7590 10/04/2004

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EXAMINER

HELLNER, MARK

ART UNIT PAPER NUMBER

3663

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/808,572

Applicant(s)

OHISHI ET AL.

Examiner

Mark Hellner

Art Unit

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8 and 28-33 is/are rejected.
- 7) ☒ Claim(s) 4, 6, 7 and 9-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/25/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Yenaiy et al.

Yenaiy et al disclose a light source comprising: a rare earth optical fiber (850) used as an optical amplification medium and outputting ASE (note stimulated fiber will output some ASE); means (834) for introducing excitation light into the rare earth fiber; a Tm-doped optical fiber (alternative taught by column 4, line 28) for generating ASE that is input to the rare earth fiber.

The structure above reads on claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yenaiy et al in view of Traynor et al.

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The difference between claims 2, 3 and 5; and the subject matter of Yenaiy et al is the specific properties of a thulium doped fiber that they set forth.

A person of ordinary skill in the art would have been motivated to seek out known properties of thulium doped fibers when implementing the embodiment suggested by column 4, line 28 of Yenaiy et al.

This motivation would have led to the consideration of Traynor et al as follows:

H6 to F4 transition (claim 2) taught by abstract.

H4 to F3 transition (claim2) taught by column 6, lines 30-37.

Pumping in the range specified by claim 3 is taught by column 5, lines 17-20.

Use of fluoride glass is taught by column 7, line 46.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yenaiy et al in view of Sakamoto et al (cited in IDS filed 4/14/20040).

The values recited by claim 8 for a Tm doped fiber are taught by figure 2 of Sakamoto et al. The person of ordinary skill in the art would have been led to this teaching when using the embodiment suggested by column 4, line 28 of Yenaiy et al.

Claims 4, 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 9-27 are objected to because of the following informalities: the antecedent basis of the term "Er-doped optical fiber" as recited by independent claims 9 and 27 needs to be clarified. Appropriate correction is required.

***Allowable Subject Matter***

Claims 9-27 are allowable if amended to correct the formal matter set forth above.

There is no teaching or suggestion by Yenaïy et al, when taken alone or in combination with the prior art, that one fiber be Tm – doped and another Er-doped within the context of independent claims 9 and 27.

***Claim Rejections - 35 USC § 102***

Claims 28 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitabayashi et al.

Kitabayashi et al disclose an optical amplifier comprising: means (1-1) for introducing signal light; means (2 and 6) for introducing excitation light; and an amplification medium including: first amplifying means (4) for using Er-doped optical fibers to amplify the signal light and second amplifying means (5) for using Tm doped fibers to amplify the output of the first amplifying means.

This structure reads on claim 28.

Claim 31 is taught by figure 6.

***Claim Rejections - 35 USC § 103***

Claims 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitabayashi et al.

The quantum transition levels set forth by claim 29 would have been obvious to a person of ordinary skill in the art because they correspond to the wavelength (1480nm) of pumping disclosed by Kitabayashi et al.

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Claim 33 would have been suggested to a person of ordinary skill in the art by figure 6, element 18 because the last stage is a power amplification stage and, as such, requires more gain per unit length than the pre-amp stage (element 14).

Claims 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitabayashi et al in view of Sakamoto et al.

The properties of a Tm-doped fiber set forth by claims 30 and 32 are taught by figure 2 of Sakamoto et al. a person of ordinary skill in the art would have been led to these teachings by the requirement that element (5) of Kitabayashi et al be made from a Tm-doped fiber.

***Allowable Subject Matter***

Claim 34 is allowed.

There is no teaching or suggestion of a Tm-doped fiber and Er-doped fiber used together within the context of claim 34.

Any inquiry concerning this communication should be directed to Mark Hellner at telephone number 703 306 4155.

Mark Hellner

Primary Examiner

AU 3663

